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Path to Progress: Sub-Saharan Africa's Economic Convergence—Learnings for Zambia to Overcome the Middle-Income Trap

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Abstract

Until after the year 2000, there has been limited economic growth in Sub-Saharan Africa. While several countries in this region have attained middle-income status and are among the fastest-growing economies globally, many others have stagnated and risk falling back to low-income level. The paper aims to examine GDP per capita economic convergence of 35 Sub-Saharan countries using a unit root model. Second, we isolate countries showing good GDP per capita convergence and reviewed each country to draw out common successful elements as lessons for Zambia. Only six out of the sampled 35 countries have slightly converged towards the United States of America. From the six countries' in-depth review, three key success elements come out as recommendations for Zambia. These include 1) Prudent management of mineral resource endowments such as copper and diamonds. Proceeds from mineral wealth should be reserved for use during hard years and to diversify the economy. 2) Strong focus on agricultural mechanization and support to smallholder farmers to ensure complete agrarian transformation. While the share of agriculture is expected to reduce as the economy grows, such a decline should only happen once the secondary sectors are fully developed. 3) Fiscal discipline in government spending, coupled with a free-market economic system, is a key to sustaining Africa's growth.

Keywords

Middle-Income Trap, Convergence, Economic Growth, GDP Per Capita

1. Background

Most of Africa's economic growth has occurred after the year 2000. Since the 1973 oil shock, the continent's economic growth was below the world's average

growth rates. Until today, the continents growth is slow as several African economies depend on the exportation of a few commodities and the income from the mining sector. As such, the recent economic growth has sparked a heated debate over its sources and sustainability (Diao & McMillan, 2018). Many studies have been undertaken to understand Africa's recent economic growth (Sy, 2020; Khan, 2013; Hadjimichael & Ghura, 1996; Basu et al., 2000). In the past 20 years, Several African countries have recorded rapid economic growth. According to the World Economic Forum, 5 of the world's ten fastest-growing economies are in Africa (Gurib-Fakim, 2019). In 2019, Ghana recorded the most growth globally at 8.79% and followed by South Sudan at 8.78%, Rwanda at 7.8%, Ethiopia at 7.7% and Côte d'Ivoire 7.4% (Mitchel, 2019).

To the contrary, several other countries have recorded minimal growth while others that proliferated have stagnated. This has led to speculations about the Middle-Income Trap (MIT) in Africa and the source of the recent growth. For instance, the impact of small and medium scale enterprises and the sustainability of mining and commodity boom led development. This article aims to establish the economic factors explaining why some African countries tend to grow faster than others, focusing on Sub Saharan Africa. The article will attempt to answer why countries like Botswana and South Africa have remained in the middle-income range for a long time. In summary, two questions stand out as follows; 1) is Africa's recent economic growth sustainable and 2) what are the critical success factors accounting for sustained economic growth in some countries?

In this paper, I use GDP per capita as a cross country measure of social and economic wellbeing. GDP per capita will also inform the study on how each county is growing with its population. GDP per capita convergence for 37 countries was compared with the United States of America (USA) to identify countries showing strong convergence. A structural transformation model was then used to analyse the economic trends and the successful elements from the countries showing strong convergence to draw suitable lessons for Zambia. The following section provides an overview of the theoretical and conceptual background for economic convergence, structural transformation model and a review of previous studies. The final section will present the finding after which conclusions and recommendations will be drawn.

1.1. Economic Convergence

In economic literature, Convergence has been discussed to describe at least in two scenarios, i.e., absolute and beta convergence. Beta-convergence is described as a process in which low-income countries grow faster than rich ones and catch up with them in terms of GDP per capita. Beta-convergence is based on the neo-classical growth theory (Solow, 1956) where a fundamental assumption is that factors of production, i.e. capital, are subject to diminishing return. Sigma-convergence focuses on explaining the reduction of growth disparities among regions over time. Many studies have used the standard deviation of GDP per

head to measure sigma convergence.

The initial studies on convergence relate to the analysis of absolute β-convergence involving identical per capita income levels for all the countries. Initial empirical investigations on the absolute convergence have verified the income convergence among the industrialized countries but found income divergence among the developing countries. While economic theory does not provide precise predictions about the convergence or divergence path, it does detail a set of factors that could determine whether a specific country will take a convergence or divergence path.

Most economists argue that being poor can be advantageous in the context of the convergence hypothesis. Fuente (2002), identifies two convergence possibilities. Firstly, that developing countries will grow faster than richer countries if technology is the same (all things equal). Secondly, rich countries would grow quicker and inequality increases. Thus, technological progress has been identified a determinant and that countries' long-term growth rate will vary if they differ in their intensity to develop or adopt new technologies.

1.2. The Share of Agriculture in GDP and Structural Transformation of the Economy

Despite the differences in the theoretical interpretations, it is generally agreed that agriculture share of GDP is expected to reduce as the economy grows. Different reasons have been put forward to explain the reduction in the agriculture share of GDP and the corresponding expansion of the secondary and tertiary sectors. According to Martin and Warr (1992), as the economy grows, agriculture declines in economic importance compared to manufacturing and services. Therefore, economic development starts with the development of agriculture. For many countries, agriculture accounted for over half of GDP and employed more than two-third of the labour force. The process by which agriculture triggers and supports economic development as well as the development of the secondary sectors of the economy is called structural transformation of the economy.

In economic literature, structural change models are systems by which underdeveloped nations transform their local economy from a heavy emphasis on traditional sectors, i.e. agriculture to more industrial and service-led growth. As a country's economy grows, the agriculture share of GDP is surpassed by the secondary sectors. The model implies that the agriculture sector's growth is key to the overall development of the country. The Lewis two-sector surplus model is an example of the structural-change approach. The model postulates that the agriculture sector fuels the rapid industrial growth by utilizing its cheap produce and laour. In this approach, Lewis emphasized the role of agriculture as a source of labour for the other industries. According to Johnston (1970), "The contribution of agriculture in food, raw materials, and financial surplus (including foreign exchange) to invest is essential for the process of industrialization in its early stages" (Johnston, 1970).

2. Literature Review

Many authors have tried to answer whether developing countries are closing the income gap with developed countries as the convergence hypothesis predicts. The terms, absolute β-convergence or conditional β-convergence have been widely used. In line with the neo-classical growth theories, convergence predicts that there would be an absolute convergence of countries due to diminishing returns to capital and that all economies are projected to converge to the same steady state. The lack of economic convergence is one of the major reason for economic stagnation in most countries, hence the recent link to the discussion on the Middle Income Trap (MIT). While most studies have tested for convergence within a region, recent studies have compared the economic growth of low-income countries to a developed country such as the United States of America.

Alexandrov (2019) found the absence of specific country convergence among 4 west Africa countries but rather found the existence of convergence clubs. He concluded that lower income countries such as Benin and Togo have a lower steady state when compared to Ghana and Cote d'Ivoire. Kumo (2011), conducted a study on growth and macroeconomic convergence in Southern Africa. Although the lack of convergence does not necessarily mean the absence of economic growth, the study found no evidence of convergence for period 1992-2009. At country level, unit root tests indicated that Botswana and South Africa's real per capita GDP converged to a common stochastic trend while the rest were characterized by a boundless drift.

Faiza (2013) focused on the conditional β-convergence and its sources for 32 African countries over the period 1960-2008. The study used the augmented Solow model and included GDP and GDP per worker. The variables were estimated using the generalised methods of movements with panel data. He concluded that the demographic structure in Africa is due to its rapid population growth which has also contributed to the low income convergence in the continent.

Pierre et al. (2019) evaluated the convergence process of per capita income of 46 countries in Africa using the concepts of s-convergence and b-convergence. The study results indicate an absence of income convergence for all African countries. They concluded that the non-convergence is due to the great heterogeneity that exists among the countries. Consistent with the findings of Alexandrov (2019), they however found the existence of convergence clubs. From the five groupings investigated, four constituted convergence clubs: Economic Community of West African States (ECOWAS), Economic Community of Central African State (CEMAC), West African Economic and Monetary Union (WAEMU) and the Southern African Development Community (SADC).

Djennas et al. (2011) examined the issue of convergence in per capita income for North African Countries to the per capita income level of countries in Southern Europe. Using the tests of sigma-convergence and polynomial be-

ta-convergence, they reject the hypothesis of beta-convergence on the whole period (1980-2007). At country level, however, there is a movement of beta-convergence only for Tunisia and Morocco.

Looking back at the arguments for and against convergence, the literature review has shown mixed results. In relation to whether or not a country will converge, two points stand out as follows; 1) the ability of a country to use and adopt new technology and, 2) the country's ability to manage the structural transformation of the economy from input led growth to growth based on economic efficiency.

2.1. Africa's, Economic Growth Trends and Sustainability

Africa's economic growth trends can be broken down in two periods, i.e., before and after 2000. From economic growth literature, it is agreed that Africa had recorded minimal economic growth until the year 2000. Africa experienced some growth from 1950 but was affected by the 1970 oil shock (Macalister, 2011). The period 1970 to 1990 was characterized by minimal growth with the worst been 1980 to 1990 (Ezenwe, 1993).

Understanding the economic dynamics accounting for the limited growth in the past years can provide useful insights into the continent's economic development strategies. According to Jerven (2017), many African countries experienced high growth towards the end of the colonial period. When many economies regained their independence, sustained growth in Africa became more prevalent.

Following the second oil price shock in 1979-1981, just a few countries achieved sustained economic growth in the 1980s. According to (Jerven, 2017) there has been a noticeable increase in Africa growth after the year 2000.

2.2. Sub-Saharan GDP Per Capita Growth Trends 1960-2019

As shown in Figure 1 below, Sub-Saharan Africa recorded a sustained GDP Per
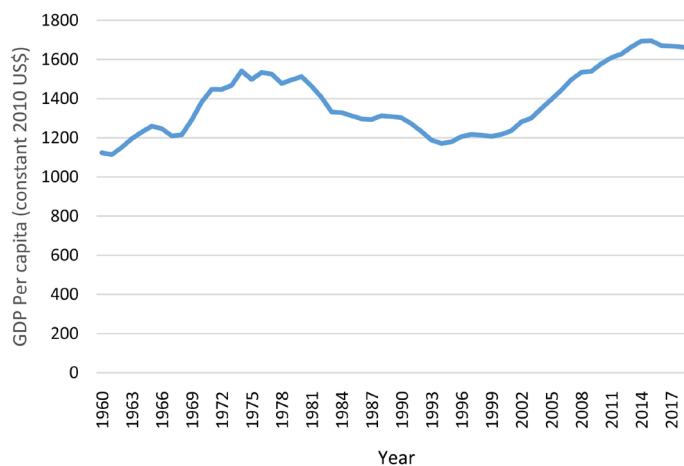

Figure 1. Sub-Saharan Africa GDP per capita trend 1960-2019. Source: Author's calculations based on World Bank data.

capita growth in two time periods, i.e., 1968-1982 and 2000-2018. Minimal growth was experienced between the period 1960-1967 and the period 1983-1996.

Following the several years of poor economic performance, growth picked up in the mid-1990s towards the year 2000. GDP per capita expanded by an average of 2.4 percent per year from 1996. According to the World Bank, the turnaround was due to better macroeconomic management, increased foreign aid and reduction of debts. Other factors include, increased commodity prices and an expansion in the exploitation of mineral resources.

According to Africa Pulse report (Vol 7) of 2013, Africa's growth has mainly been driven by mineral resource exploitation. In fact thirteen out of the 21 countries that reached middle-income status are all resource-rich. The pulse report further explains that only 4 or 5 countries in the region will not be involved in mineral exploitation by 2020. Despite the fact that resource rich countries have grown the most in the period 1996-2011, a number of resource poor countries such as Rwanda, Ethiopia and Mozambique have also shown some positive growth.

While the contribution of mineral resources to Africa's growth is understood, further studies should be conducted to understand the growth drivers in resource poor countries. An analysis of the structural transformation of the economy in both resource rich and resource poor countries would help to formulate suitable economic growth strategies for Africa. This is a key to attaining the required economic convergence and to reduce the income gap with developed countries.

3. Methodology

In line with the background discussed above, a two-step process was employed to understand Africa's Convergence. In the first step, GDP per capita convergence tests are conducted in 38 countries, including 35 Sub-Saharan countries. The United States of America (USA) a benchmark country, while Singapore and Thailand other examples. The goal was to identify which countries are converging with the USA in terms of GDP per capita.

The variables were generated by converting all the GDP per capita to the natural logarithm (growth) of the 38 countries that were included in the study and then subtracting the natural logarithm of each of the other 37 countries from the natural log of GDP per capita of the United States of America. The United States of America was used in this case as the benchmark to assess whether the comparable countries have been stagnant relative to the United States of America or not.

Following the graphical representation of the convergence analysis, countries converging with the US were identified for further review to determine the economic factors accounting for their positive economic status.

For each of the countries, the study analyzed the economy at three levels as follows.

- Structural transformation—the share of GDP among the three sectors name-

ly agriculture, manufacturing, and services.

- Management of mineral resources.
- Economic systems.

Based on the obtained results from the previous steps, lessons for Zambia were drawn.

4. Results and Discussion

Convergence analysis for 38 Countries was done using their GDP per capita data for 1970-2018. **Figure 2** shows the convergence analysis 1970-2019 for all countries. From **Figure 2**, we can conclude that all the country's GDP per capita levels including Zambia are diverging from the US except for a few countries as follows.

- Botswana,
- Rwanda,
- Eswatini,
- Morocco,
- Tunisia.

Both Thailand and Singapore are also converging with the US. The following section outlines the country-specific trends for each of the five Sub-Saharan African Countries to identify success factors and pick out Zambia lessons.

Contrary to the convergence hypothesis, only 5 out of the sampled 35 countries have shown positive convergence with US. These countries include Botswana, Rwanda, Eswatini, Morocco, and Tunisia. The rest of countries have recorded minimal growth and are diverging from the US in terms of GDP per capita. The divergence in GDP per capita implies that they are facing economic transitional issues as they move from resource driven growth to growth based on economic efficiency. According to Martin and Warr (1992), agriculture can only drive economic growth during a country's initial development process.
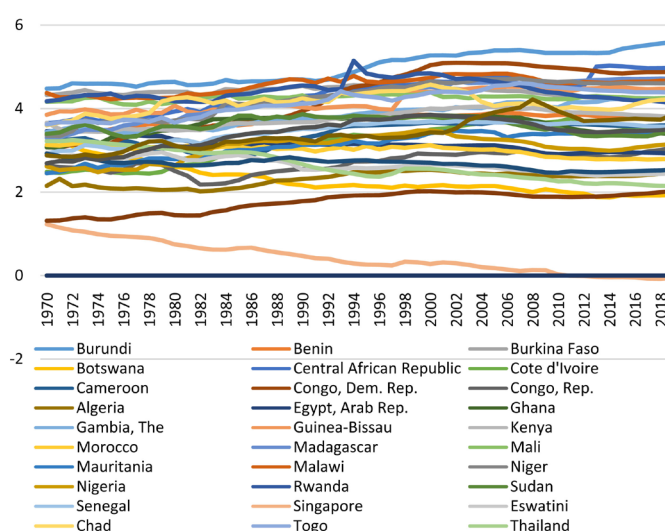

Figure 2. Convergence analysis 1970-2019. Source: Author's calculations based on World Bank data.

4.1. Factors Accounting for Limited Growth in Growth in Sampled Countries

A key element for the lack of GDP per capita growth in the 30 sampled countries is the heavy reliance on usually vulnerable agriculture sectors. In addition, many of these countries are not classified among the "resource rich" countries. This is consistent with the World Bank (2013) Africa Pulse report which points out that the proceeds from the rich resource countries are the reasons behind Africa recent economic growth especially in the period after 1996. Although Zambia is a resource rich country, it is among the 30 countries diverging from the US in terms of GDP per capita. When compared with other resource rich countries like Angola and Botswana, it would imply that Zambia is not managing its resource endowments to the benefit of the overall economy. Therefore, Zambia should learn from how other "resource rich" countries like Botswana are managing their mineral wealth in order to avoid the so called "resource curse".

Lack of agriculture transformation is another reason for the lack of sustained economic growth for many countries. For instance, the economies of countries like Benin and Malawi, mainly relies on the agriculture sector as the main driver of economic growth. To overcome the economic challenges in such countries, there is a need to transition from an input led production system to a capital intensive production system. They should improve agriculture productivity through mechanization in order to trigger growth in the industrial and services sectors. Based on this background, Zambia has a double advantage in that it can benefit from both its mineral resources and the agriculture sector. The country's poor performance in the period after the lower middle income classification in 2010 is an indication that both mining and agriculture are not performing well.

4.2. Country Level Trends from Successful Countries

As seen in Figure 3 below, Singapore, Botswana, and Thailand have converged
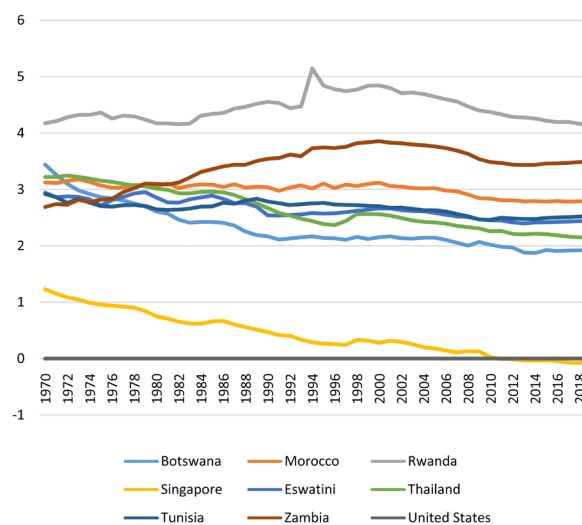

Figure 3. Convergence analysis 1970-2019 for eight countries. Source: Author's calculations based on World Bank data.

the most. In Africa, Botswana has recorded the highest in terms of GDP per capita convergence with the US. Rwanda experienced the worst growth in the mid-1990s due to the civil wars but has recorded sustained economic growth from 1996 onwards. The graph below presents information from the eight countries, including six Sub-Saharan countries and the US.

4.3. Economic Transformation

4.3.1. The Structural Transformation of the Economy

As highlighted in the study methodology, the economy's structural transformation involves reallocating a country's economic gains across the three sectors, namely agriculture, manufacturing, and services. As an economy moves from a traditional input led growth to growth based on economic efficiency, agriculture's share of GDP reduces and increases for services and manufacturing.

4.3.2. Sector Contribution of GDP

Agriculture is an important sector of the African economy. Its share in GDP is from 2.4% (Equatorial Guinea) to 70% (Liberia), and it averages 15% of the continent's GDP (Ali et al., 2020). In line with economic literature, all countries have recorded a reduction in Agriculture's share to GDP for 2009-2019. Interestingly, Zambia has recorded the most decline of agriculture shares of GDP reducing by 8.81%, followed by Tunisia 2.25% and Singapore with the lowest reduction at 0.01 percent (Table 1).

While services and Industry seem to be on the right track for Zambia, the regress in agriculture share to GDP is too fast, indicating an incomplete agricultural transformation. A further reduction has far-reaching implications on poverty reduction and income inequality. There is a need to focus explicitly on agriculture for development rather than agriculture in industrialization. This is relevant for Zambia, given that over 60% of the population is in poverty and agriculture is still the primary source of livelihood for over 50% of the population. Incomplete agriculture transformation could be a potential growth trap as the country's focus on other economic sectors.

In line with the structural transformation model, the sectoral share of GDP depends on economic development in any country. As an economy grows, the percentage of agriculture to economic growth reduces, moving towards the secondary sectors. Based on the above data, it is essential to emphasize the role of agriculture to economic development. The development of the secondary sectors (services and Industry) depends on an adequate supply of raw materials from agriculture. The following section discusses the individual country GDP per capita growth trends and the economic systems' impact on growth.

4.4. Botswana's Economic Growth Trends

As shown in the graph below and line with the convergence hypothesis, Botswana has been converging with the US in terms of GDP per capita for 1970-2019 (Figure 4).
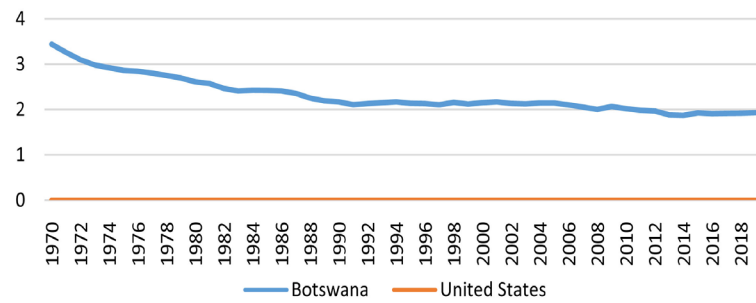
Figure 4. Botswana-US GDP per capita convergence analysis 1970-2019. Source: Author's calculations based on World Bank data.

Table 1. Agriculture, Industry, and Services share of GDP in 1990 and 2019.

Country	Sectors	% share of GDP 1990	% share of GDP 2019	% Difference
Botswana	Agriculture	2.82	1.95	**−0.87**
	Industry	56.85	60.62	3.77
	Services	28.16	28.3	0.14
Rwanda	Agriculture	25.28	24.07	**−1.21**
	Industry	15.82	18	2.18
	Services	49.5	49.27	−0.23
Tunisia	Agriculture	7.85	10.4	**2.55**
	Industry	31.45	22.74	−8.71
	Services	55.14	59.23	4.09
Morocco	Agriculture	13.02	11.38	**−1.64**
	Industry	24.24	26.03	1.79
	Services	51.51	50.03	−1.48
Eswatini	Agriculture	9.25	8.77	**−0.48**
	Industry	39.91	33.8	−6.11
	Services	48.56	53.15	4.59
Zambia	Agriculture	11.55	2.74	**−8.81**
	Industry	30.22	42.12	11.9
	Services	51.55	50.03	−1.52
Singapore	Agriculture	0.04	0.03	**−0.01**
	Industry	27.02	24.49	−2.53
	Services	68.01	70.38	2.37
Thailand	Agriculture	9.79	8	**−1.79**
	Industry	38.61	33.4	−5.21
	Services	51.6	58.59	6.99

After gaining its independence in 1966, Botswana was among the poorest countries in the world. It was classified as a middle-income Country in 1986,

and the World Bank ranked it as an upper-middle-income country in 2005. A few questions standout 1) how did Botswana maintain a sustainable economic growth process despite its heavy reliance on diamonds? What lessons can apply to Zambia? Like Zambia, which depends on copper, Botswana is highly reliant on its diamond mineral wealth. While there concerns about the mineral resource depletion in both countries and the continued emphasis on economic diversification, Botswana has benefited more from her diamonds than Zambia must copper.

4.4.1. Botswana's Strategy for Mineral Resources

According to Asfaha (2007), resource-rich countries like Botswana and Zambia face five challenges as follows.

1) Buffering itself from excessive short-term revenue volatility;

2) Protecting the broader economy in particular manufacturing and agriculture from contraction, i.e., Dutch Disease;

3) Establishing strong socio-economic institutions for economic and revenue-based diversification;

4) Ensuring itself against the long-term decline of revenue due to the likely depletion of resources and;

5) Ensuring inter-generational equity.

Despite the many challenges associated with resource abundance, Botswana has overcome some challenges usually posed by the "resource curse". The country has become renowned for managing its mineral wealth effectively and escaping the resource curse. One of the most diamond-rich countries in the world has experienced remarkable growth for several decades. Though the impressive 14% GDP growth achieved during the first years after independence is now near 3.5%, Botswana is still one of Africa's fastest-growing countries. Botswana is a good example of a country that has successfully managed its mineral resources to avoid the so called "mineral curse" thanks to the country's three-pronged approach: first, the country pursued economic diversification to reduce dependence on the volatility of the mining sector; second, the country de-linked expenditure from revenue, and finally, it invested surplus revenue for use by future generations (Castel, 2012).

4.4.2. Lessons for Zambia

Zambia has similar characteristics with Botswana. Therefore, it is appropriate to draw lessons from Botswana's structural transformation, management of mineral resources, and economic systems and recommend improvements to Zambia's economy. Table 2 shows the lessons from Botswana to Zambia.

4.5. Rwanda's Economic Growth Trends

Compared to the US, Rwanda has maintained steady GDP per capita growth for the period after the civil wars and massive genocide (1996-2018) (Figure 5).

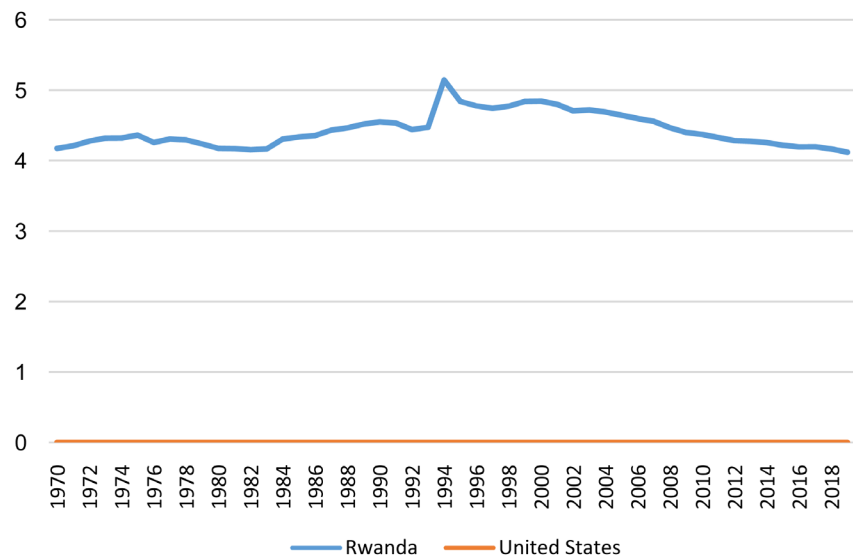The economy of Rwanda has undergone rapid industrialization. A successful

Figure 5. Rwanda-US GDP per capita convergence analysis 1970-2019. Source: Author's calculations based on World Bank data.

Table 2. Lessons from Botswana to Zambia.

		Botswana	Zambia
1		The structural transformation of the economy	The structural transformation of the economy
	a	The gradual agricultural transformation process that supports the growth of secondary sectors. Botswana's agriculture share of GDP has only reduced by 0.87% in 2009-2019.	Rapid reduction of agriculture shares of GDP. Zambia could learn from Botswana by increasing investment in agriculture to ensure complete agriculture transformation. Zambia's agriculture share to GDP has reduced by 8.81% in the period 2009 to 2019.
2		Management of mineral resources	Management of mineral resources
	a	Economic diversification	Strengthen the agenda for economic diversification through national development plans
	b	Delink Expenditure from Revenue	Although mineral resources are near depletion, learn from Botswana to de-link expenditure from mineral revenue
	c	Invest surplus revenue for use by a future generation	Like Botswana, invest surplus revenue from mineral resources for use by future generations
3		Economic systems	Economic systems
	a	Since independence, Botswana adopted a free market economy.	Although a free market economy currently governs Zambia, much could have been gained if this system was adopted right from independence. Much was lost in the 1970s when the state opted for state control.

government policy significantly contributed to the rapid industrialization and improved living standard since the early 2000s (Newfarmer & Twum, 2018). The economy of Rwanda depends on the subsistence economy, i.e., tea, coffee, and tourism.

The mining sector also contributes to the country's economy, as Rwanda is one of the largest tantalum producers. Second, from mining, agriculture is the main economic activity and is the primary source of employment for two-thirds of the population and the primary source of income for 80% of Rwandese. According to the World Bank, agriculture accounts for 29% of GDP and about 80% foreign exchange. Like many developing countries, Rwanda's industrial sector depends on the processing of primary agricultural products. The industrial sector accounts for 16.2% of GDP and 9% of employment. The World Bank estimates that over 70% of Rwanda's industries are in Kigali with minimal urban canters' activities.

Rwanda's tertiary sector contributes about 47.8% of GDP and accounts for 25% of the total workforce. The government vision 2020, aspires to make the services sector as the primary driver of the economy.

Lessons for Zambia

Table 3 shows the comparisons between Rwanda and Zambia, and the structural transformation of Rwanda's economy, management of mineral resources, and economic systems and recommended improvements to Zambia's economy.

Table 3. Comparisons between Rwanda and Zambia.

		Rwanda	Zambia
1		The structural transformation of the economy	The structural transformation of the economy
	a	Next to services, agriculture accounted for the second-largest share of GDP at 24.07% in 2019. Rwanda has developed a comprehensive agriculture development framework. Additional policies and programs include Land registration law, the crop intensification program, and the promotion of farmer cooperatives. Developed a strategic plan for the transformation of Agriculture in Rwanda.	Could learn from Rwanda in the following areas. • Development of a tailored strategic plan for the transformation of Agriculture • Increase agriculture export
2		Management of mineral resources	Management of mineral resources
	a	Rwanda, like most mineral-exporting countries in Sub-Saharan Africa, exports minerals in semi-processed concentrate form.	Zambia should work towards value addition to the mining sector by investing in local value addition enterprises.
3		Economic systems	Economic systems
	a	Despite the heavy reliance on subsistence farming, Rwanda adopted a mixed economic system, combined with centralized economic planning and government regulation.	Like Rwanda, emphasis on maintaining a free market

4.6. Morocco's Economic Growth Trends

In the last 20 years, Morocco's economy has been achieved stable macro-economic growth and low levels of inflation. The country's economy had remained stable and mainly depends on exports, private investments, and tourism.

As seen in Figure 6, Morocco has maintained relatively stable growth in terms of GDP per capita and is one of the African countries showing a greater likelihood of converging with the USA. Like Zambia, Morocco has made significant efforts to strengthen agriculture and tourism.

Lessons for Zambia

Table 4 shows the comparisons between Morocco and Zambia regarding the structural transformation of Rwanda's economy, management of mineral resources, and economic systems and lessons for Zambia.
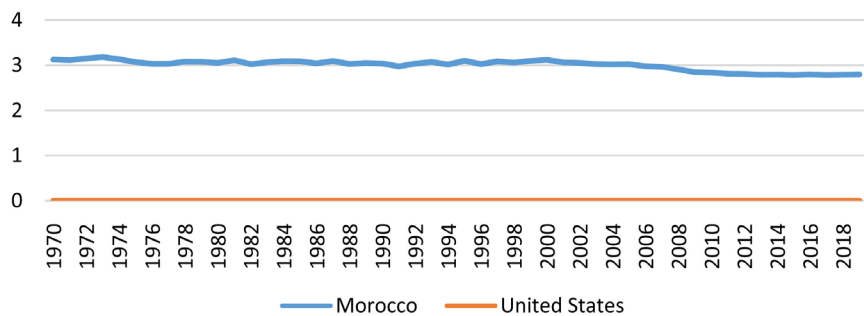

Figure 6. Morocco-US GDP per capita convergence analysis 1970-2019. Source: Author's calculations based on World Bank data.

Table 4. Comparisons between Morocco and Zambia.

	Morocco	Zambia
1	The structural transformation of the economy	The structural transformation of the economy
a	The agricultural sector employs nearly 34% of the workforce and contributes to 11.4% of GDP (Emmanuel Pinto Moreira, 2019). Industry accounts for 26% of the GDP and employs 22% of the workforce	Agricultural share of GDP can be increased like Morocco and Industry should focus on the value-added to the mining sector
2	Management of mineral resources	Management of mineral resources
a	Morocco has a relatively small number of mineral resources, phosphates being its primary source of wealth.	Zambia should work towards value addition for the mining sector by investing in local value addition enterprises
3	Economic systems	Economic systems
a	Morocco is a liberal economy governed by the law of supply and demand. Since 1993, the country has followed a privatization policy of specific economic sectors that used to be in the government's hands.	Similar to Morocco with an emphasis on the free market

5. Conclusion

The paper aimed to examine GDP per capita economic convergence of 35 sub-Saharan countries and to conduct a review of each country to draw lessons for Zambia. The convergence analysis results showed that all the countries GDP per capita incomes, including Zambia, are diverging from the US except Botswana, Rwanda, Eswatini, Morocco, and Tunisia. Lessons for Zambia were drawn through a detailed analysis of mineral resource management, structural transformation of the economy and economic systems in the four successful countries. Since agriculture is an important sector of the African economy and the main source of income for the rural population (Ali et al., 2020), Zambia could learn from Botswana to increase investment in agriculture to ensure complete agriculture transformation, from Rwanda to increase agriculture export, and from Morocco to employ more people in this sector. Zambia should further maintain a free-market economy and improve market conditions in Industry, Services, and Agriculture. Zambia should focus on creating favourable conditions for intensifying investments in agriculture. Finally, although mineral resources are near depletion, Zambia should learn from Botswana to delink expenditure from mineral revenue.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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